

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,628	10/12/2001	David W. Biessener	1009-001US02	9397
28863	7590	08/24/2004		
EXAMINER				NAMAZI, MEHDI
ART UNIT				PAPER NUMBER
2188				

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/975,628	BIESSENER ET AL.	
	Examiner	Art Unit	
	Mehdi Namazi	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 12 October 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-48 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-4,8,11,12,15,18,19,22-26,29,30,34-38,43-46 and 48 is/are rejected.
 7) Claim(s) 5-7,9,10,13,14,16,17,20,21,27,28,31-33,36,39-42 and 47 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 12 October 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/6/02, 8/29/03</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. This office action is in response to application filed October 12, 2001.

Specification

2. Applicant is required to update status of the related patent applications on page 1.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 8, 11, 12, 15, 18, 19, 22-26, 29, 30, 34-38, 43-46, and 48 are rejected under 35 U.S.C. 102(e) as being anticipated by Tzelnic et al. (US. Patent No. 6,366,987).

As per claims 1, 15, 19, 25, 34, 38, 43, 48, Tzelnic teaches a method comprising:
storing data received from a host computer prior to a time T0 on a primary storage
(writing data to data to primary storage during typical operation, col. 5, lines 56-59);
storing data received from the host computer after time T0 on a secondary storage
(after receiving data into primary storage, the data will be copy into the secondary
storage, col. 5, lines 60-63); maintaining a record of the data written to the secondary
storage (directory 28, fig. 1, element 28); and selectively reading data from the primary
storage and the secondary storage based on the record (cols. 7-8, lines 64-6).

As per claims 2, 23, 44, 45, 46, Tzelnic teaches maintaining a record comprises storing the record in a computer-readable medium coupled to the host computer (fig. 4, element 70).

As per claim 3, Tzelnic teaches maintaining a record comprises storing the record in a computer-readable medium of a controller coupled to the host computer via an input/output (I/O) bus (fig. 4, shows the I/O connections to the element 70).

As per claims 4, 18, 24, 29, 37, Tzelnic teaches maintaining a record comprises: defining a map designating corresponding logical storage units for the first and secondary storage; and updating the map to indicate whether data has been written to the logical storage units of the secondary storage (col. 6, lines 22-27).

As per claim 8, Tzelnic teaches initializing the record in response to a restore signal (col. 8, lines 23-25).

As per claim 11 Tzelnic teaches receiving a reconcile command; copying data between the first and secondary storage devices in response to the reconcile command until the first and secondary storages store equivalent data; and resetting the record (col. 6-7, lines 45-3).

As per claim 12, Tzelnic teaches detecting free cycles for a bus in the host computer; and copying data from the primary storage to the secondary storage during the unused bus cycles (it is inherent in any computer system to use the idle time for other activities).

As per claim 22, Tzelnic teaches the controller is coupled to the host computer via an input/output (I/O) bus (fig. 4, element 76).

As per claim 26, Tzelnic teaches the restoration switch includes a hardware switch (inherent).

As per claim 30, Tzelnic teaches the reconcile switch includes a hardware switch (inherent).

As per claim 35, Tzelnic teaches a restoration switch, wherein actuating the restoration switch places the secondary storage in a T0 state (inherent).

Allowable Subject Matter

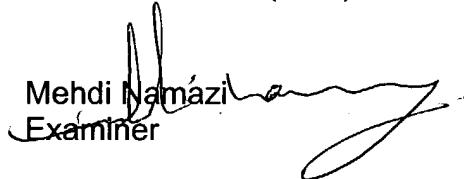
4. Claims 5-7, 9, 10, 13, 14, 16, 17, 20, 21, 27, 28, 31-33, 36, 39-42, and 47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Namazi whose telephone number is 703-306-2758. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 703-306-2903. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mehdi Namazi
Examiner



August 22, 2004